UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/487,401	01/19/2000	John R. Shedden	ST9-99-033	3119

7590 06/01/2004	**EXAMINER**
David N Koffsky Esq	FLEURANTIN, JEAN B
Ohlandt Greeley Ruggiero & Perle	

	ART UNIT	PAPER NUMBER
One Landmark Square Suite 903	2172	
Stamford, CT 06901		

DATE MAILED: 06/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 March 2004*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   Claims 1-18 remain pending for examination.

Priority

2.   Applicant's claim for domestic priority (U.S. No. 60/130,221, filed 20 April 1999) under

35 U.S.C. 119(e) is acknowledged.

Drawings

3.   The Examiner accepts the drawings filed on May 31, 2002.

Response to Arguments

4.   Applicant's arguments filed 18 March 2004 have been fully considered but they are not

persuasive. Because of the following reasons:

In response to applicant's argument on page 7, that "Ledain et al. patent does not describe

a computer system having data in a first log and a copy of the data in a second log," It is

submitted that Ledain discloses an operating system which includes a log device (first log)

provides and potentially read back from the log device disks (second log).

In response to applicant's argument on page 8, that "it does not disclose any particular

parameter, much less a parameter indicative of demand for access to read a log", as recited in

claim 1. It is submitted that Ledain discloses a system of entry point overlay, which allows the

log device to be logically switched in and out of the data stream between the operating system

and the mass storage drives based on a variety of parameters including the current write controlling application environment, (see col. 6, lines 34-40).

Furthermore, Ledain discloses file data reads must continually evaluate the log itself to determine whether more current data resides in the log, (see col. 4, lines 12-15). It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify the teachings of Ledain with steps of determining a parameter indicative of demand for access to read said first log. Such modification would allow the teachings of Ledain to improve the accuracy and the reliability of the active log read I/O balancing for log duplexing.

MPEP 2111 Claim Interpretation; Broadest Reasonable Interpretation

During patent examination, the pending claims must be "given the broadest reasonable interpretation consistent with the specification" Applicant always has the opportunity to amend the claims during prosecussion and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 162 USPQ 541,550-51 (CCPA 1969). The court found that applicant was advocating ... the impermissible importation of subject matter from the specification into the claim. See also In re Morris, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997) (The court held that the PTO is not required, in the course of prosecution, to interpret claims in applications in the same manner as a court would interpret claims in an infringement suit. Rather, the "PTO applies to verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definition or otherwise that may be afforded by the written description contained in application's specification.").

The broadest reasonable interpretation of the claims must also be consistent with the

interpretation that those skilled in the art would reach. In re Cortright, 165 F.3d 1353, 1359, 49

USPQ2d 1464, 1468 (Fed. Cir. 1999).

For the above reasons, it is believed that the last Office Action was proper.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent

No. 5,832,515 issued to Ledain et al. ("hereinafter Ledain").

As per claims 1 and 7, Ledain discloses, "a method for enabling improved access

to data form a computer memory system during a data recovery operation" (see col. 8, lines 15-

19), "said computer memory system having said data in a first log (see figure 2, element 44), and

copy of said data in a second log," (see figure 2, element 52) and (cols. 9-10, lines 61-5), the

method comprising the steps of:

"responding to a process request to read said data from said first log" (see figure 2,

element 44), by "determining a parameter indicative of demand for access to read said first log"

as at least data that is to be read from selected filesystem nominally maintained on the main

filesystem disk 40 is routed through the log device pseudo deice driver 44, (see col. 9, lines 19-

22);

"wherein said process is one of a plurality of processes concurrently attempting to read

said first log during said data recovery operation" as the log device disk 52 will be co-dependant

on the concurrent use of the read data path from the log device disk 52 through the log device

pseudo device driver 44 to the operating system core, (see col. 9, lines 45-50), and column 5,

lines 23-26.

Ledain does not explicitly disclose assigning the process to read said copy of said data

from said second log if said parameter has reached a threshold value. However, it is well known

in the art, that assigning the process to read said copy of said data from said second log if said

parameter has reached a threshold value. On the other hand, Ledain discloses once a log disk has

reached the filed segment threshold, in which the head of the logical log wraps to the next log

disk in sequence, (see col. 29, lines 57-60), and column 30, lines 19-24. It would have been

obvious to a person of ordinary skill in the art at the time of the invention was made to modify

the teachings of Ledain with steps of assigning the process to read said copy of said data from

said second log if said parameter has reached a threshold value. Such modification would allow

the teachings of Ledain to improve the accuracy and the reliability of the active log read I/O

balancing for log duplexing, and to provide efficient storage and retrieval of data with respect to

an operating system executing on a computer system to the data storage system, (see col. 5, lines

38-40).

As per claims 2, 8 and 14, Ledain discloses, "wherein said first log is primary a log" as a

log device peudo-device driver 44 is provided in connection with the operating system core 32

and main disk device driver 34, (see col. 9, lines 10-13).

As per claims 3, 9 and 15, Ledain discloses, "wherein said parameter is a count of said

plurality of processes assigned to a primary log" as once a log disk has reached the filled

segment threshold, in which the head of the logical log wraps to the next log disk in sequence,

(see col. 29, lines 57-59).

As per claims 4, 10 and 16, in addition to the discussion in claim 1, Ledain

further discloses the step of b) "distributes new process assignments to both the said first log and

said second log in an attempt to balance work of the said first and second logs" as the balance of

the current data segment may be filled with new data blocks written through the data interface 66

or as a result of cleaning the new log tail data segment, where data blocks are actively being

directed through the data interface 66 for storage on the log device, in which the compacted data

blocks obtained from the prior log tail data segment may be mixed in order of receipt by the

segment 1/0 routine 78 into the current segment buffer maintained by the segment 1/0 routines

78, (col. 17-18, lines 65-6).

As per claims 5, 11 and 17, in addition to the discussion in claim 1, Ledain further

discloses b) "alternates new process assignments to said first log and the said second log

in an attempt to balance work of said first and second logs" as the balance of the current data

segment may be filled with new data blocks written through the data interface 66 or as a

result of cleaning the new log tail data segment, where data blocks are actively being

directed through the data interface 66 for storage on the log device, the compacted data

blocks obtained from the prior log tail data segment may be mixed in order of receipt by

the segment 1/O routine 78 into the current segment buffer maintained by the segment

1/O routines 78, (see cols. 17-18, lines 65-6).

As per claims 6, 12 and 18, Ledain discloses, "wherein said parameter is a count of

requests that have been queued to said first log" as once a log disk has reached the filled segment

threshold, the head of the logical log wraps to the next log disk in sequence, (see col. 29, lines

57-59).

As per claim 13, Ledain discloses, "a computer system that enables improved access

to data form a memory system during a data recovery operation" (see col. 8, lines 15-19), "said

memory system having said data in a first log (see figure 2, element 44), and a copy of said data

in a second log," (see figure 2, element 52) and (cols. 9-10, lines 61-5), the method comprising

the steps of:

"means for determining a parameter indicative of demand to read said first log" (see

figure 2, element 44), by determining a parameter indicative of demand for access to read said

first log" as at least data that is to be read from selected filesystem nominally maintained on the

main filesystem disk 40 is routed through the log device pseudo deice driver 44, (see col. 9, lines

19-22);

"wherein said process is one of a plurality of processes concurrently attempting to read

said first log during said data recovery operation" as the log device disk 52 will be co-dependant

on the concurrent use of the read data path from the log device disk 52 through the log device

pseudo device driver 44 to the operating system core, (see col. 9, lines 45-50), and column 5,

lines 23-26.

Ledain does not explicitly disclose logging means responsive to a process request to <u>read</u>

<u>said data from said second</u> log if said parameter has reached a threshold value. However, it is

well known in the art, that assigning the process to <u>read said copy of said data from said second</u>

log if said parameter has reached a threshold value. On the other hand, Ledain discloses once a

log disk has reached the filed segment threshold, in which the head of the logical log wraps to

the next log disk in sequence, (see col. 29, lines 57-60), and column 30, lines 19-24. Ledain

discloses . It would have been obvious to a person of ordinary skill in the art at the time of the

invention was made to modify logging means responsive to a process request to <u>read said data</u>

<u>from said second</u> log if said parameter has reached a threshold value. Such modification would

allow the teachings of Ledain to improve the accuracy and the reliability of the active log read

I/O balancing for log duplexing, and to provide efficient storage and retrieval of data with

respect to an operating system executing on a computer system to the data storage system, (see

col. 5, lines 38-40).

Conclusion

6.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

[Remainder of page intentionally left blank]

CONTACT INFORMATION

7.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Jean B Fleurantin whose telephone number is 703-308-6718.

The examiner can normally be reached on 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John B Breene can be reached on 703-305-9790. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jean Bolte Fleurantin

May 24, 2004

SHAHID ALAM
PRIMARY EXAMINER